



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:

KOUBUCHI et al

Serial No.:

10/619,039

Filed:

July 14, 2003

For:

Semiconductor Integrated Circuit Device

Art Unit:

2814

Examiner:

L. Pham

## CITATION OF DOCUMENTS UNDER 37 CFR 1.56

Mail Stop: DD

Commissioner for Patents

October 21, 2004

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In the matter of the above-identified application, applicants are submitting herewith, under 37 CFR 1.56, a copy of United States Patent No. 5,614,445 to Hirabayashi.

This patent discloses a method of dicing a semiconductor wafer, including forming trench grooves in the integrated circuit region of the wafer and dummy etched grooves in a scribe line zone of the wafer. Both the trench grooves and the dummy etched grooves are filled with polycrystalline silicon to provide a smooth wafer surface. This patent discloses forming a sidewall insulating film 8 on the inner sidewall of the trench, as shown in Figure 3 and as described at column 5, lines 56 - 64, and describes the etching problem at column 3, lines 26 - 44.

However, the document does not disclose the dishing problem of the polishing method, and does not disclose an insulating film buried in the trench by polishing an insulating film formed over the trench.

Consideration of the Hirabayashi patent by the Examiner is requested.

Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus Deposit Account No. 01-2135 (Case: 501.36127CC3), and please credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

Alan E. Schiavelli

Registration No. 32,087

AES/jla (703) 312-6600 Attachments

FORM PTO-1449 U.S. Department of Commerce (Rev. 4/92) Patent and Trademark Office										Y. DOCKET NO.		SERIAL NO.			
PERMENT BY APPLICANT OUT 2 17 200 Peral sheets if necessary) U.S. PATEN										501.36127CC3		10/619,039			
										APPLICANT  KOUBUCHI et al					
										IG DATE		GROUP			
										July 14, 2003		2814			
VENT 8	TRAD	EMACE					u.s.	PATE	NT DO	CUMENTS					
EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLASS	SUBCLASS	FILING DATE ASS IF APPROPRIATE		
		5	6	1	4	4	4	5	3/97	Hirabayashi					
				<u> </u>					•						
				1					· · · · · ·		1				
				<u> </u>							1				
											:				
FOREIGN PATENT DOCUMENTS															
									DATE	COUNTRY CL	CLASS	SS SUBCLASS	TRANSLATION		
					·								YES	NO	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)															
	OTTEN DOCUMENTS (Including Author, Title, Date, Fertilletit Fages, Etc.)														
									· · · · · · · · · · · · · · · · · · ·						
EXAMINER DATE CONSIDERED															
			<del></del>												

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.